

WHAT IS CLAIMED IS:

1. An image forming device comprising:

a photosensitive drum rotatable in a predetermined direction about an axis and having a peripheral surface on which an electrostatic latent image is formed;

a driving unit;

a drive signal generating unit that generates a drive signal to be applied to the driving unit, the driving unit rotating the photosensitive drum in response to the drive signal;

a charging unit that is disposed in confrontation with the photosensitive drum and electrically charges the photosensitive drum;

a charging bias applying unit that applies a charging bias to the charging unit;

a developing agent bearing member that is disposed in confrontation with the photosensitive drum in a position further downstream than the charging unit with respect to the predetermined direction in which the photosensitive drum rotates, the developing agent bearing member forming a developed image on the photosensitive drum by applying developing agent on the electrostatic latent image on the photosensitive drum;

a transfer unit that is disposed in confrontation with the photosensitive drum in a position further upstream than

the charging unit with respect to the predetermined direction but further downstream than the developing agent bearing member, the transfer unit transferring the developed image on the photosensitive drum onto a recording medium;

5 a control unit that controls the charging bias applying unit to terminate application of the charging bias to the charging unit at a time before rotations of the photosensitive drum stops completely by interrupting application of the drive signal from the drive signal
10 generating unit to the driving unit, and controls a potential between the photosensitive drum and the developing agent bearing member so that a lesser amount of the developing agent on the developing agent bearing member adheres to the photosensitive drum before the photosensitive
15 drum stops completely.

2. The image forming device according to claim 1, further comprising a transfer bias applying unit that applies a transfer bias to the transfer unit, wherein when an area on the photosensitive drum opposite the transfer
20 unit reaches a position opposite the charging unit resulting from the rotation of the photosensitive drum after a first predetermined time period, the control unit controls the transfer bias applying unit to switch the transfer bias at a transfer bias switching time that precedes the first
25 predetermined time period from a time when application of

the charging bias is stopped so that a lesser amount of the developing agent on the developing agent bearing member adheres to the photosensitive drum before the photosensitive drum stops completely.

5 3. The image forming device according to claim 2, wherein the control unit controls the transfer bias applying unit to stop applying the transfer bias at the transfer bias switching time and generates a potential difference between the photosensitive drum and the developing agent bearing member so that static electric force imparted from the photosensitive drum to the developing agent bearing member acts on the developing agent.

15 4. The image forming device according to claim 2, wherein the transfer bias applying unit has a first mode for applying a first transfer bias to the transfer unit when the developed image is transferred onto the recording medium, and a second mode for applying a second transfer bias to the transfer unit, the second transfer bias generating a greater potential difference between the photosensitive drum and the transfer device than the first transfer bias, and wherein 20 the control unit controls the transfer bias applying unit at the transfer bias switching timing at least when the transfer bias applying unit is in the second mode.

25 5. The image forming device according to claim 4, wherein the control unit controls the transfer bias applying

unit, when the transfer bias applying unit is in the second mode, to switch from the second transfer bias to the first transfer bias at the transfer bias switching timing.

5 6. The image forming device according to claim 1, wherein the control unit controls the charging bias applying unit to stop applying the charging bias after the drive signal from the drive signal generating unit to the driving unit stops but before the photosensitive drum stops completely.

10 7. The image forming device according to claim 1, further comprising a developing bias applying unit that applies a developing bias to the developing agent bearing member, wherein when an area on the photosensitive drum opposite the charging unit reaches a position opposite the
15 developing agent bearing member resulting from the rotation of the photosensitive drum after a second predetermined time period, the control unit controls the developing bias applying unit to switch the developing bias at a developing bias switching time that precedes the second predetermined
20 time period from a time when application of the charging bias is stopped.

25 8. The image forming device according to claim 7, wherein the control unit controls the developing bias applying unit to apply to the developing agent bearing member a developing bias of a reverse polarity with respect

to the polarity of the charge of the developing agent at the developing agent switching time, and generates a potential difference between the photosensitive drum and the developing agent bearing member so that static electric force imparted from the photosensitive drum to the developing agent bearing member acts on the developing agent.

9. The image forming device according to claim 8, wherein the control unit controls the developing bias applying unit to stop application of the developing bias of a reverse polarity after the photosensitive drum has completely stopped moving.

10. The image forming device according to claim 1, further comprising a ground bias applying unit that applies a ground bias to the photosensitive drum, wherein when an area on the photosensitive drum opposite the charging unit reaches a position opposite the developing agent bearing member resulting from the rotation of the photosensitive drum after a second predetermined time period, the control unit controls the ground bias applying unit to switch the ground bias at a ground bias switching time that precedes the second predetermined time period from a time when application of the charging bias is stopped.

11. The image forming device according to claim 10, wherein the control unit controls the ground bias applying unit to switch the ground bias to a bias value greater than

the developing bias at the ground bias switching time, and generates a potential difference between the photosensitive drum and the developing agent bearing member so that static electric force imparted from the photosensitive drum to the developing agent bearing member acts on the developing agent.

12. The image forming device according to claim 11, wherein the control unit controls the ground bias applying unit to stop ground bias application when the photosensitive drum has completely stopped moving.

13. The image forming device according to claim 1, wherein the developing agent bearing member collects the developing agent remaining on the photosensitive drum after passing through the transfer unit.